

Module 10: Garden Ecology

Urban EcoLab

May 2021

Lesson Plan - Maintaining the Garden Site "From Table to Farm"

Center for Urban Resilience

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LESSON #8: Maintaining the Garden Site

"From Table to Farm"

OVERVIEW:

As the Activities in Lesson 7 have set the Garden up for success, the Activities in Lesson 8 will ensure all the Maintenance Programs that have been put in place are working. A review of all the garden maintenance processes will be done in this Lesson, and additional maintenance considerations will be added to the schedule, including Pest Management, Composting, Fertilizing the Soil, Soil Coverage and Rotating Crops, for a full year-round cycle that can be followed at any garden site.

SUB-QUESTION(S)/CONSIDERATIONS:

Part of making sure a garden survives is ensuring the Garden Maintenance processes are working, and if not, revising them as needed. In addition, processes must be set in motion to plan for long-term care of the garden. Additional considerations should include:

- Plants need to be assessed to see if they are thriving and disease free
- An Integrated Pest Management (IPM) approach needs to be initiated to keep garden pests under control
- Garden conditions need to be checked for quality of soil (fertilizing), soil coverage (some mulch), and watering program/schedules
- Having a robust, maintainable composting program and schedule
- Rotating crops to ensure quality soil for all seasons
- A maintenance plan needs to be established to address all these issues all year-round and long-term

WAYS OF KNOWING URBAN ECOLOGY:

<u> </u>	
	Students will
Understand	. Assign and complete the different tasks and needs
	required to maintain the garden and
	address new considerations
Talk	. Discuss how to coordinate each group and ask for
	needs
Do	. Conduct research and Manage a checklist with tasks
	and goals to measure progress
Act	. Coordinate garden team to do their part

SAFETY GUIDELINES:

Review field guidelines when taking students outside to do any site visit.

PREPARATION:

Time: 4-5 class periods

MATERIALS (enough for # groups @ 4 in each group): Activity 8.1 (1 class period): KWL & PowerPoint – Maintaining the Garden

- Flip chart paper and markers
- Projector
- Computer/laptop to show PowerPoint
- White board/projector screen

Activity 8.2 (1-2 class periods): Research – Expert Groups - Long-Term Garden Maintenance

- Computers for students to conduct research
- Access to the Internet for research
- Student Handout Long-Term Garden Maintenance (SH_M10.8.2)
- Student Reading "Setting up and running a school garden."
- Student Reading "In the Garden" by Greg Rubin.
- Student Reading "What is Table to Farm" by DairyGood.
- Pencils/Pens

Activity 8.3 (1 class period): Expert Groups Share Research

- Completed Student Handouts from Activity 2 (SH_M10.8.2)
- Flip Chart paper and markers

Activity 8.4 (1 class period): Master Garden Maintenance Checklist and Assigned Tasks

- Student Handout Sample Master Garden Maintenance Checklist (SH_M10.8.4)
- Projector
- Computer/laptop to show Excel spreadsheet at front of class
- White board/projector screen
- Access to Excel for Master Garden Maintenance Checklist revisions

INSTRUCTIONAL SEQUENCE:

Activity 8.1 – (1 class period): KWL & PowerPoint – Maintaining the Garden

- <u>Step 1:</u> Using a pre-labeled KWL flip chart paper at the front of the room, ask students what they now know about maintaining a garden (write down answers, call on students as needed).
- <u>Step 2</u>: Now ask students what they want to learn about potential additional considerations for maintaining a garden long-term (again, write down answers, call on students as needed).
- <u>Step 3:</u> Next show the Lesson PowerPoint, cross-referencing students' ideas with the ideas in the PowerPoint.
- <u>Step 4:</u> Make a Master List of Additional Long-Term Garden Maintenance Considerations on a flip chart paper in the room, that can be referenced throughout this Lesson.
- <u>Note:</u> Time-permitting, go to the links embedded within the PowerPoint to share with students the websites related to Integrated Pest Management (IPM) and the UC Master Gardener Program.

Activity 8.2 (1-2 class periods): Research – Expert Groups - Long-Term Garden Maintenance

- <u>Step 1:</u> As a lesson activator, review the chart compiled from the previous day's brainstorming, on additional garden maintenance considerations for maintaining the garden long-term.
- <u>Step 2</u>: Distribute the Student Handout (SH_10.8.2). Review the categories/topics that are listed on the handout, as well as the topics that were brainstormed in the previous day's activity. Be sure to add any expert group topics as needed, to include student ideas.
- <u>Step 3:</u> Divide the class into Expert Groups, with students working together to research one topic. For example, if 30 students, could have six (6) groups of 5 or five (5) groups of 6, depending on the number of topics you end up with.

- <u>Note:</u> Be sure to provide students the links to the research materials provided in the Lesson 8 PowerPoint (Integrated Pest Management-IPM and the UC Master Gardener Program). In addition, make available the vast Gardening reference sources provided in Module 10 for the topics in this Lesson (pest management, composting, fertilizing, garden maintenance, etc. Those resources may be sufficient for the research. Additional internet sites can be accessed as well.
- <u>Step 4:</u> Have the class begin their research. This may take 1 or 2 class periods, depending on the number of students in the class, the number of computers available, and the number of topics you end up with after incorporating students' ideas.

Activity 8.3 (1 class period): Expert Groups Share Research

- Step 1: Have students get together in their Expert Groups, bringing their completed student handout from Activity 2 (SH_M10.8.2).
- <u>Step 2:</u> Have groups report out on their topic. Be sure to capture key ideas in a flip chart paper at the front of the room, which can be incorporated into the final Master Garden Maintenance Checklist.
- <u>Step 3:</u> Exit Ticket have students write down (or say) one new thing they learned that they had not considered at the beginning of the Lesson, when thinking about additional considerations for maintaining a garden long-term.

Activity 8.4 – (1 class period): Master Garden Maintenance Checklist and Assigned Tasks

- Step 1: Tell students now is the day to capture what needs to be done on a master checklist, assign tasks, and begin the work!
- <u>Step 2</u>: Distribute the Lesson 8 Student Handout Sample Master Garden Maintenance Checklist for this activity (SH-M10 L8 A4).
- <u>Step 3</u>: Have students compare the Sample with what the student research indicated to be included; advise students to hand-write

- changes / additions on their sample, while you project the Master on the screen, and make updates real-time. This allows students to see their feedback being incorporated in the final product.
- <u>Step 4:</u> Advise students each group will get a new Master Garden Maintenance Checklist when it can be printed and distributed, but now jobs can get assigned, and time-permitting, students can begin work on their assigned tasks.

Summary Notes – By the end of the Lesson, Students will be able to (SWBAT):

- Identify garden needs and next steps to maintaining the garden
- Create a checklist to manage the garden needs and timelines
- Conduct research on various topics involved in maintaining the garden long-term
- Share research with peers
- Assign tasks to team members
- Complete the tasks identified and assigned
- Work cooperatively to reach desired goals

Lesson Standards Alignment (CA-NGSS) – See Chart in Module 10 Curriculum Support Materials.

Lesson Adaptations and Extensions – See Chart in Module 10 Curriculum Support Materials.